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Wakefield Damping in a Distributed Coupling Accelerating Structure for CLIC

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In this talk we develop a standing wave cell design to be used in a distributed coupling structure that satisfies the CLIC transverse wake potential limit. We start by designing a standing wave cell based on the middle cell of the CLIC-G* traveling wave structure. Next we adapt the cell to be suitable for distributed coupling and simulate its wake potentials in an ideal case where open boundaries are applied to all waveguides connected to the cell. Once we reduce the wake potentials below the threshold in this optimistic scenario, we add an electric boundary to the model to simulate total reflection at a distribution network. We analyze the resulting reflected wake potentials and present a damping solution.

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